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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,307	11/27/2000	Emanuel Calenoff	21417/91482	5598

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EXAMINER	
ZHOU, SHUBO	

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 02/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/723,307	CALENOFF ET AL.	
	Examiner	Art Unit	
	Shubo "Joe" Zhou	1631	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ they raise the issue of new matter (see Note below);
   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____.
3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *see continuation sheet*.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *1*.

   Claim(s) withdrawn from consideration: *2-27*.
8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Continuation 5c):

In regard to the rejection of claim 1 under 35 USC 103(a), applicants argue that the cited references do not teach or suggest the steps of (a)-(g) of the claimed invention. Specifically, applicants argue that the references do not teach or suggest receptor or receptor-like molecule. This is not deemed persuasive for the following reasons. The reference by Taylor-Papadimitriou et al. clearly teaches that the MUC1 protein is a membrane protein with a cytoplasmic tail and an extrcellular domain with tandem repeats, and states that it "is normally expressed at the apical or lumenal surface of the epithelial cells, but in the invasive tumor cell, it can be distributed all over the membrane", and it "could be the first molecule to be encourntered by infiltrating leukocytes or any other nearby cell. Therefore, potentially it is an important molecule in cell interaction." See page 228, right column. Given that MUC1 is a membrane protein, it would have been obvious to one of ordinary skill in the art that during such cell interactions, if it is important for the interaction, MUC1 would bind to some molecules from the interacting cell. Absent a clear definition for the term "receptor" or "receptor-like" molecule in the specification, MUC1 in such interaction would be interpreted as a recptor-like molecule (step 1a). Further, Taylor-Papadimitriou et al. mapped and identified a hydrophillic region of the MUC1 polypeptide and located the amino acid residues where gycosylation occurs (Table 1). They further disclose that an abnormal glycosylation only occurs in abnormal cancer but not in normal epithelial cells. These correspond to the steps (b)-(d) of the claim. While Hopp et al. use the rolling sum of 6 residues instead of the 7 residues as instantly claimed, it would have been obvious to one of ordinary skill in the art that one could do a rolling sum of 5, 7, or any other numbers of residues because the only reason Hopp et al. arbitrarily chose 6 is "because this is the approximate size of an antigenic determinant." See page 3824, right column. Since 6 is the approximate size, one of ordinary skill in the art would have been motivated to try other numbers of residues around 6, such as 7 or 5 to determine whether a better result would be obtained. As to steps (e)-(g), applciants argue that the references do not teach or suggest synthesizing the peptides according to steps (a)-(d), label the peptides and test whether they are cancer associated. This is not found persuasive either. Taylor-Papadimitriou et al. disclose that the abnormally glycosylated MUC1 can elicit specific antibody and that the antibody can be used for diagnosis. Thus, a cancer cell with such abnormally glycosylated MUC1 would contain specific antibody to the antigen. It would have been obvious to one of ordianry skill in the art that the antibody can be labeled and used for diagnosis or therapy because it binds to the antigen, as disclosed by Taylor-Papadimitriou et al, or label the antigen for diagnosis, etc. because it would bind to the antibody which would only be present in cancer cells. Therefore, steps (e)-(g) would have been obvious at the time the invention was made.

JOHN S. BRUSCA, PH.D
PRIMARY EXAMINER